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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,247	12/02/2003	John B. Amundson	H0005441-9950 (1161.11371)	3535
128 7590 08/23/2007 HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			EXAMINER NGUYEN, LE V	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/726,247		AMUNDSON ET AL.	
	Examiner		Art Unit	
	Le Nguyen		2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 and 61-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 and 61-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/29/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to an amendment filed 5/24/07.
2. Claims 1-58 and 61-71 are pending in this application; and, claims 1, 11, 21-24, 37, 44, 50, 54, 57, 58, 66 and 71 are independent claims. Claims 59 and 60 have been cancelled; and, claims 1, 2, 11, 21-29, 37-42, 44-55, 58 and 66-68 have been amended. This action is made Final.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

4. Claim 55 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "heating and/or cooling" (claim 57) should be heating or cooling to clearly set them as alternatives.

Claim Rejections - 35 USC § 102

5. Claims 54-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Alles.

As per claim 54, Alles teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space in accordance with a first set point (fig. 21; col. 31, line 40 through col. 32, line 5; *a first set*

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point 2113), the method comprising: deactivating at least a first part of the HVAC system to not modify and control at least one environmental condition of the inside space in accordance with the first set point (figs. 20-22; col. 31, lines 13-17; col. 31, line 40 through col. 32, line 5; *when the temperature reaches a certain threshold level 2113 and 2116, a signal is sent to deactivate one or more component in the system such as heating or AC*); monitoring the environmental condition in the inside space that the HVAC system is no longer modifying and controlling and automatically activating the at least one part of the HVAC system to again modify the environmental condition in the inside space if the environmental condition in the inside space passes a second set point wherein the second set point is different than the first set point (fig. 21; col. 31, line 40 through col. 32, line 5; *a second set point 2116*).

As per claim 55, Alles teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space against a first set point wherein the at least one environmental condition is one or more of temperature or humidity (fig. 21; col. 31, line 40 through col. 32, line 5; *an environmental condition such as a temperature of an inside space is modified and controlled against a first set point such as 2113*).

As per claim 56, Alles teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space against a first set point wherein the second set point is user selectable (fig. 21; col. 31, line 40 through col. 32, line 5).

As per claim 57, Alles teaches a method for controlling an HVAC system that has a fan that normally operates during heating and/or cooling operations (col. 9, lines 2-7) and comprises requesting a time indicator from a user (figs. 20-21; col. 27, line 50 through col. 28, line 8; col. 27, lines 25-27; col. 31, lines 46-64; col. 32, lines 58-67; *start time and end time are accepted via 2010 of PDA interface upon selection of any of the times such as 2004 of "Sleeping"*), over-riding the fan for a time corresponding to the time indicator provided by the user (fig. 21; col. 32, lines 11-12) and returning to normal fan operation after the time expires (fig. 20; *after the time for "Sleeping" expires, fan operation returns to normally scheduled "Active" mode*).

6. Claims 66-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Ehlers et al. ("Ehlers").

As per claim 66, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure, the method comprising: controlling a first environmental condition using a first control set point (col. 31, lines 8-9; *e.g. customer established first set point such as a set point for "holiday"*); sensing the first environmental condition outside of the structure and adjusting the first control set point if the environmental condition outside of the structure passes a predetermined value (col. 30, line 65 through col. 31, line 23).

As per claim 67, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure wherein the environmental condition is temperature (col. 30, line 65 through col. 31, line 23).

As per claim 68, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure wherein the environmental condition is humidity (col. 30, line 65 through col. 31, line 23; col. 29, lines 4-13; col. 8, lines 26-35).

As per claim 69, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure wherein the first control set point is adjusted in a manner that reduces the load on the HVAC system (col. 31, lines 24-35).

As per claim 70, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure wherein the first control set point is only allowed to be adjusted by a predetermined amount (col. 33, line 47 through col. 34, line 38; *user established first control set point is only allowed to be adjusted by a predetermined amount, i.e. having a set point offset of 4 degrees F in a maximum savings setting*).

As per claim 71, Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure, the HVAC system having a duty cycle that varies with the environmental condition outside of the structure, the method comprising: controlling the environmental condition in the inside space using a first control set point; sensing the duty cycle of the HVAC system and adjusting the first control set point if the duty cycle of the HVAC system exceeds a predetermined value (col. 30, line 65 through col. 31, line 23).

Claim Rejections - 35 USC § 103

7. Claims 1-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles in view of Liebl et al. ("Liebl"), and further in view of Ehlers et al. ("Ehlers").

As per claim 1, although Alles teaches a method of modifying a programmable schedule for a controller having a user interface and comprising the steps of providing, simultaneously or sequentially, two or more schedule override choices to a user via the user interface, accepting a selection of one of the two or more schedule override choices from the user via the user interface and modifying the schedule based on the user responses provided via the user interface (figs. 20-21; col. 27, lines 17-27; col. 31, lines 40-45; *selecting any comfort-climate 2005 causes "Comfort-Climate" popup menu 2100 of the PDA interface to appear wherein popup menu 2100 displays schedule choices to a user wherein users may override a schedule choice by selecting one of the schedule choices 2101 to appear in the temperature schedule display 2001*), Alles does not explicitly disclose a method of automatically returning to the regular schedule following a regular schedule override, i.e. a schedule modified temporarily from a regular schedule. Liebl teaches a method of overriding and, therefore, providing a regular schedule and automatically returning to the regular schedule (figs. 2 and 9(A-C); col. 14, lines 33-67). It would have been obvious to an artisan at the time of the invention to incorporate the method of Liebl with the method of Alles given that, by automatically returning to a regular schedule after selection of a bookmarked custom mode, users are provided a time-saving benefit of not having to remember to make an additional selection to return to the regular schedule.

Alles and Liebl do not explicitly disclose temporarily overriding a regular schedule. Ehlers teaches overriding a regular schedule and automatically returning to the regular schedule (fig. 4H; following the temporary override, e.g. after 18 days, the system reverts to the regular schedule). It would have been obvious to an artisan at the time of the invention to incorporate the method of Ehlers with the method of Alles and Liebl given that users may temporarily override a regular schedule in one step versus two steps, thereby, providing users with a time-saving feature.

As per claim 2, the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the step of automatically returning to the regular schedule occurs after the selected schedule override choices expires (Liebl: figs. 2 and 9(A-B); col. 14, lines 33-49). Furthermore, the step of automatically returning to the regular schedule occurs after the selected schedule override choices expires (Ehlers: fig. 4H).

As per claim 3, the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises providing one or more natural language schedule override choices (Alles: fig. 21; col. 27, lines 17-27; col. 31, lines 40-45; *natural language schedule override choices such as choices that include phrases with one or more provided words "Sleeping", "Active", "Empty", "Relaxing" or words entered by the user*).

As per claim 4, the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the accepting step further comprises accepting a schedule override start time, end time or duration,

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and temperature (Alles: figs. 20-21; col. 27, line 50 through col. 28, line 8; col. 27, lines 25-27; col. 31, lines 46-64; col. 32, lines 58-67; *start time and end time are accepted via 2010 of PDA interface upon selection of any of the times 2004, and temperature is accepted via 2110 or 2160 upon selection of 2102, 2122 or any of the temperature ranges 2008*).

As per claim 5, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Come Home Early" user input. Official Notice is taken that users inputs such as "Come Home Early" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Come Home Early" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 6, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Come Home Late" user input. Official Notice is taken that users inputs such as "Come Home Late" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Come Home Late" with the

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method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 7, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Get Up Early" user input. Official Notice is taken that users inputs such as "Get Up Early" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Get Up Early" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 8, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Stay Up Late" user input. Official Notice is taken that users inputs such as "Stay Up Late" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Stay Up Late" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 9, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing

step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Stay Home" user input. Official Notice is taken that users inputs such as "Stay Home" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Stay Home" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 10, although the modified Alles teaches a method of modifying a programmable schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose an "On Vacation" user input. Official Notice is taken that users inputs such as "On Vacation" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "On Vacation" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

Claims 11 and 12 in combination is similar in scope to claim 2 and are therefore rejected under similar rationale, except for the UI being a touchscreen which the modified Alles also teaches (Alles: col. 26, lines 54-66).

Claim 13 is similar in scope to claim 3 and is therefore rejected under similar rationale.

Claim 14 is similar in scope to claim 4 and is therefore rejected under similar rationale.

Claim 15 and 21 are individually similar in scope to claim 5 and are therefore rejected under similar rationale.

Claims 16 and 22 are individually similar in scope to claim 6 and are therefore rejected under similar rationale.

Claims 17 and 23 are individually similar in scope to claim 5 and are therefore rejected under similar rationale.

Claim 18 is similar in scope to claim 8 and is therefore rejected under similar rationale.

Claim 19 is similar in scope to claim 9 and is therefore rejected under similar rationale.

Claim 20 is similar in scope to claim 10 and is therefore rejected under similar rationale.

As per claim 24, although Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface and comprising the steps of providing one or more schedule override choices to a user via the user interface (figs. 20-21; col. 27, lines 17-27; col. 31, lines 40-45; *selecting any comfort-climate 2005 causes "Comfort-Climate" popup menu 2100 to appear wherein popup menu 2100 of the PDA interface displays schedule choices to a user wherein users may override a schedule choice by selecting one of the schedule choices 2101 to appear in the temperature schedule display 2001*), accepting one or more user responses to the one

or more schedule override choices from the user via the user interface at a first time (fig. 21; *upon selection of 2121 to the one or more schedule override choices, a first time is accepted*) and modifying the schedule based on the user responses provided by the user interface at a second time wherein the second time is later than the first time (fig. 21; *modifying the schedule based on selection of 2005 such as "Active" at a second time wherein the second time is later than the first time "Sleeping"*), Alles does not explicitly disclose that the schedule is modified temporarily. Liebl teaches a schedule override that is modified temporarily (figs. 2 and 9(A-C); col. 14, lines 33-67). It would have been obvious to an artisan at the time of the invention to incorporate the method of Liebl with the method of Alles given that, by automatically returning to a regular schedule after selection of a bookmarked custom mode, users are provided a time-saving benefit of not having to remember to make an additional selection to return to the regular schedule.

Alles and Liebl do not explicitly disclose a step of temporarily overriding a regular schedule such that the overriding step begin at a second time that is later than the first time. Ehlers teaches a step of selecting a temporary schedule override among multiple temporary schedule overrides wherein the overriding step begin at a second time that is later than the first time (fig. 4H; following the temporary override, e.g. after 18 days, the system reverts to the regular schedule). It would have been obvious to an artisan at the time of the invention to incorporate the method of Ehlers with the method of Alles and Liebl given that users may temporarily select schedule override(s) in one step versus two steps, thereby, providing users with a time-saving feature.

As per claim 25, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises the second time being later than the first time by a user selected time interval (Ehlers: via UI of fig. 4H; Alles: fig. 20; col. 27, line 50 through col. 28, line 8; *a 2-hour time interval between 6:00 am and 8:00 am was chosen wherein the time may be edited by selecting 2004*).

As per claims 26 and 39, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises a user selected time interval (Ehlers: via UI of fig. 4H) is at least 10 minutes (Alles: fig. 20; col. 27, line 50 through col. 28, line 8).

As per claims 27 and 40, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises a user selected time interval (Ehlers: via UI of fig. 4H) is at least 30 minutes (Alles: fig. 20; col. 27, line 50 through col. 28, line 8).

As per claims 28 and 41, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises a user selected time interval (Ehlers: via UI of fig. 4H) is at least 1 hour (Alles: fig. 20; col. 27, line 50 through col. 28, line 8).

As per claims 29 and 42, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises a user selected time interval (Ehlers: via UI of fig. 4H) of increments of 2, 3, 5 and 6 hours wherein the time marking an interval between

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choices can be edited by the user (Alles: fig. 20; col. 27, line 50 through col. 28, line 8), Alles does not explicitly disclose the chosen time interval to be at least 24 hours. Official notice is taken that a 24-hour chosen time interval is well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate 24-hour chosen time interval with the method of the modified Alles in order to provide users with greater laxity in scheduling by not requiring a time period limitation.

As per claims 30 and 44, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the accepting step further comprises accepting a schedule override start time, end time or duration, and temperature, wherein the start time is the second time (Alles: figs. 20-21; col. 27, line 50 through col. 28, line 8; col. 27, lines 25-27; col. 31, lines 46-64; col. 32, lines 58-67; *start time and end time are accepted via 2010 of PDA interface following selection of any of the times 2004, and temperature is accepted via 2110 or 2160 upon selection of 2102, 2122 or any of the temperature ranges 2008*).

As per claims 31 and 45, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input within a menu or a listing of choices (Ehlers: fig. 4H; Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Come Home Early" user input. Official Notice is taken that users inputs such as "Come Home Early" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Come Home Early" with the method

of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 32, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input (Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Come Home Late" user input. Official Notice is taken that users inputs such as "Come Home Late" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Come Home Late" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claims 33 and 46, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input within a menu or a listing of choices (Ehlers: fig. 4H; Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Get Up Early" user input. Official Notice is taken that users inputs such as "Get Up Early" is well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Get Up Early" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claims 34 and 47, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface

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wherein the providing step comprises displaying a natural language schedule override choice that users input within a menu or a listing of choices (Ehlers: fig. 4H; Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Stay Up Late" user input. Official Notice is taken that users inputs such as "Stay Up Late" user inputs are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Stay Up Late" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claims 35 and 48, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input within a menu or a listing of choices (Ehlers: fig. 4H; Alles: figs. 21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose a "Stay Home" user input. Official Notice is taken that users inputs such as "Stay Home" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "Stay Home" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claims 36 and 49, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a natural language schedule override choice that users input within a menu or a listing of choices (Ehlers: fig. 4H; Alles: figs.

21-23; col. 32, lines 28-47), the modified Alles does not explicitly disclose an "On Vacation" user input. Official Notice is taken that users inputs such as "On Vacation" are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate users inputs such as "On Vacation" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

Claims 37 and 38, in combination, are similar in scope to claim 24 and are therefore rejected under similar rationale.

Claim 43 is similar in scope to claim 30 and is therefore rejected under similar rationale.

8. Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles in view of Riley et al. ("Riley"), and further in view of Ehlers et al. ("Ehlers").

As per claim 50, although Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface and comprising the steps of providing one or more schedule override choices to a user via the user interface (figs. 20-21; col. 27, lines 17-27; col. 31, lines 40-45; *selecting any comfort-climate 2005 causes "Comfort-Climate" popup menu 2100 to appear wherein popup menu 2100 of the PDA interface displays schedule choices to a user wherein users may override a schedule choice by selecting one of the schedule choices 2101 to appear in the temperature schedule display 2001*) accepting a start time, end time or duration, and energy saving temperature response to the one or more schedule comfort override choices from the user via the user interface at a first time (figs. 20-21; col. 27, line 50

through col. 28, line 8; col. 27, lines 25-27; col. 31, lines 46-64; col. 32, lines 58-67; *following selection of any of the times 2004, start time and end time for a first time are accepted upon selection of 2121 to the one or more schedule override choices via 2010 of the PDA interface; temperature is accepted via 2110 or 2160 upon selection of 2102, 2122 or any of the temperature ranges 2008*) and modifying the schedule based on the user responses provided by the user interface at a second time wherein the second time is later than the first time (fig. 21; *modifying the schedule based on selection of 2005 such as "Active" at a second time wherein the second time is later than the first time "Sleeping"*), Alles does not explicitly disclose that energy saving is included as one of the one or more schedule override menu choices. Riley provides for energy saving schedule override menu choices to a user (fig. 1A; col. 15, lines 22-50). It would have been obvious to an artisan at the time of the invention to incorporate the method of Riley with the method of Alles in order to utilize energy efficiently in accordance with users' budget.

Alles and Riley do not explicitly disclose a step of temporarily overriding a regular schedule such that the overriding step begin at a second time. Ehlers teaches a step of selecting a temporary schedule override among multiple temporary schedule overrides wherein the overriding step begin at a second time (fig. 4H; following the temporary override, e.g. after 18 days, the system reverts to the regular schedule). It would have been obvious to an artisan at the time of the invention to incorporate the method of Ehlers with the method of Alles and Riley given that users may temporarily select

schedule override(s) in one step versus two steps, thereby, providing users with a time-saving feature.

As per claim 51, the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the modifying step comprises the second time being later than the first time by a user selected time interval (Ehlers: fig. 4H; Alles: fig. 20; col. 27, line 50 through col. 28, line 8; *a 2-hour time interval between 6:00 am and 8:00 am was chosen wherein the time may be edited by selecting 2004*).

As per claim 52, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a schedule energy saving override menu choice that is editable (Alles: figs. 21-23; col. 32, lines 28-47; Riley: fig. 1A; col. 15, lines 22-50), the modified Alles does not explicitly disclose that "Come Home Late" is displayed. Official Notice is taken that displaying words such as "Come Home Late" is well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate displaying words such as "Come Home Late" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

As per claim 53, although the modified Alles teaches a method of modifying a programmable HVAC schedule for a controller having a user interface wherein the providing step comprises displaying a schedule energy saving override menu choice that is editable (Alles: figs. 21-23; col. 32, lines 28-47; Riley: fig. 1A; col. 15, lines 22-

50), the modified Alles does not explicitly disclose that "On Vacation" is displayed.

Official Notice is taken that displaying words such as "On Vacation" is well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate displaying words such as "On Vacation" with the method of the modified Alles in order to provide users full editing capabilities without any word/phrase restrictions.

9. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riley in view of Alles.

As per claim 58, Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space of a structure, the structure having at least one window that opens and closes, the method comprising based on user input into the UI, detecting an indication that a window is or has been opened, deactivating at least part of the HVAC system to not modify and control at least one environmental condition of the inside space, detecting an indication that the window is or has been closed, activating the at least part of the HVAC system that was deactivated to again modify and control the at least one environmental condition of the inside space (col. 15, lines 41-50; col. 18, lines 3-25; col. 28, lines 30-40). Riley does not explicitly disclose a displayed indication being provided by a user. Alles teaches a displayed indication being provided by a user (figs. 20-21; col. 27, line 50 through col. 28, line 8; col. 27, lines 25-27; col. 31, lines 46-64; col. 32, lines 28-47 and 58-67; *indications are provided by a user via mode creation and editing mode capabilities concerning temperature, time and naming/renaming of modes*). It would have been obvious to an artisan at the time of the invention to incorporate the method of

Alles with the method of Riley in order to provide users greater flexibility in controlling environmental conditions, i.e. users have the flexibility to run the HVAC system at an alternate setting such as higher comfort level or lower comfort level based upon preferences or conditions that effect operations of the HVAC system such as an open window.

10. Claims 61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley in view of Alles, and further in view of Ehlers et al. ("Ehlers").

As per claim 61, although the modified Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space of a structure, the structure having at least one window that opens and closes and further comprising the step of providing an alarm if one or more environmental conditions falls outside of a predetermined set point (Riley: col. 18, lines 27-31) while the at least part of the HVAC system is deactivated (Riley: col. 18, lines 3-25), the modified Riley does not explicitly disclose providing an alarm if one or more environmental conditions falls outside of a predetermined range. Ehlers teaches providing an alert/alarm if one or more environmental conditions falls outside of a predetermined range (fig. 4J; col. 45, line 39 through col. 46, line 8). It would have been obvious to an artisan at the time of the invention to incorporate the method of Ehlers with the method of the modified Riley in order to avoid rapid fluctuations around a single point.

As per claim 62, the modified Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an

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inside space of a structure, the structure having at least one window that opens and closes wherein the alarm is provided when an environmental condition such as an inside temperature drifts beyond a temperature set point, i.e. the alarm is provided based on a detection of an inside temperature drifting beyond a set point, including activating/deactivating at least a part of the HVAC system to modify an environmental condition if the environmental condition passes a set point and activating/deactivating at least a part of the HVAC system to modify an environmental condition if a situation such as an open window is detected (Ehlers: fig. 4J; col. 45, line 39 through col. 46, line 8; Riley: col. 2, lines 9-21). Furthermore, the modified Riley teaches an open window set point wherein the open window set point is an arbitrary number set by the user, thereby, anytime a user establish a low set point or a high set point, the set point is equivalent to an open window set point (Ehlers: col. 2, lines 32-45).

As per claim 63, the modified Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space of a structure, the structure having at least one window that opens and closes wherein the alarm is provided when an inside humidity level drifts beyond an open window humidity set point (Riley: col. 18, lines 26-31; *described is a system that triggers an alarm upon detecting an environmental condition that drifts beyond a set point wherein the system detects other environmental conditions including an inside humidity level*; Ehlers: col. 2, lines 32-45; col. 29, lines 38-41; *wherein an open window set point is an arbitrary number set by the user, thereby, anytime a user establish a low set point or a high set point, the set point is equivalent to an open window set point*).

As per claim 64, the modified Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space of a structure, the structure having at least one window that opens and closes wherein the alarm is provided when an inside air quality falls outside of an open window air quality range (Riley: col. 18, lines 27-31; *alarm provided when an environmental condition such as an inside air quality drifts beyond a set point*; Ehlers: col. 2, lines 32-45; fig. 4J; col. 45, line 39 through col. 46, line 8; *wherein an open window set point is an arbitrary number set by the user, thereby, anytime a user establish a low set point or a high set point, the set point is equivalent to an open window set point*).

11. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riley in view of Alles and Ehlers et al. ("Ehlers") as applied to claim 61, and further in view of Roy.

As per claim 65, although the modified Riley teaches a method for controlling an HVAC system that is adapted to modify and control at least one environmental condition of an inside space of a structure, the structure having at least one window that opens and closes wherein the alarm is provided when the temperature falls outside of a predetermined range (Riley: col. 18, lines 27-31; Ehlers), the modified Riley does not explicitly disclose an alarm being provided when the barometric pressure drops by a predetermined amount. Roy teaches a signal/alarm being provided when the barometric pressure drops by a predetermined amount (col. 4, lines 35-42; *a signal is provided when the inside barometer air pressure reading is below the outside air pressure by a*

predetermined value). It would have been obvious to an artisan at the time of the invention to incorporate the method of Roy with the method of the modified Riley in order to overcome various ventilation problems and compensate for such conditions as cold air drafts caused by exhausting kitchen odors.

Response to Arguments

12. Applicant's arguments with respect to claims 1, 11, 21-24, 37, 44, 50-54, 58-60, 66, 71 have been considered but are moot in view of the new ground(s) of rejection, except for the following:

Applicant argued the following:

(a) Alles does not appear to teach a method for controlling an HVAC system including the steps of deactivating at least a first part of the HVAC system to not modify and control an environmental condition with respect to a first set point, monitoring the environmental condition and automatically activating that first part of the HVAC system to modify the environmental condition if the condition passes a second set point.

(b) Ehlers appears to teach sensing a second environmental condition inside the structure and adjusting the first set point in accordance with the condition inside the structure instead of adjusting the first set point in accordance with the condition sensed outside the structure.

(c) The comfort-climate menu of Alles appear to relate to parameters that are used to program the regular schedule not schedule overrides.

The Office disagrees for the following reasons:

Per (a), Alles teaches a method for controlling an HVAC system including the steps of deactivating at least a first part of the HVAC system to not modify and control an environmental condition with respect to a first set point (col. 31, line 40 through col. 32, line 5; when a temperature is entered for "Heat When Below This Temperature", for example, 32 degrees and the temperature rises to a first set point of 32 degrees from 31 degrees, the heater is deactivated), monitoring the environmental condition and automatically activating that first part of the HVAC system to modify the environmental condition if the condition passes a second set point (col. 31, line 40 through col. 32, line 5; if the temperature drops to a second set point of 31 degrees following the temperature rise from 31 degrees to 32 degrees, the heater is automatically activated)

Per (b), Ehlers teaches a method for controlling an HVAC system that is adapted to modify and control an environmental condition of an inside space of a structure, the method comprising: controlling a first environmental condition using a first control set point (col. 31, lines 8-9; *e.g. customer established first set point such as a set point for "holiday"*); sensing the first environmental condition outside of the structure such as relative humidity and adjusting the first control set point if the environmental condition outside of the structure passes a predetermined value (col. 30, line 65 through col. 31, line 23; relative humidity is outdoor humidity).

Per (c), the modified Alles allow users to set a regular schedule via a UI and make subsequent modifications to the regular schedule via the UI (Alles: figs. 20-21; col. 27, lines 17-27; col. 31, lines 40-45).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquires

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lê Nguyen whose telephone number is **(571) 272-4068**. The examiner can normally be reached on Monday - Friday from 7:00 am to 3:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached at (571) 272-4063.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LVN
Patent Examiner
July 26, 2007

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